Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

HW#76H: Quadrilateral Review

Honors Geometry

Due: Monday, April 13th, 2015

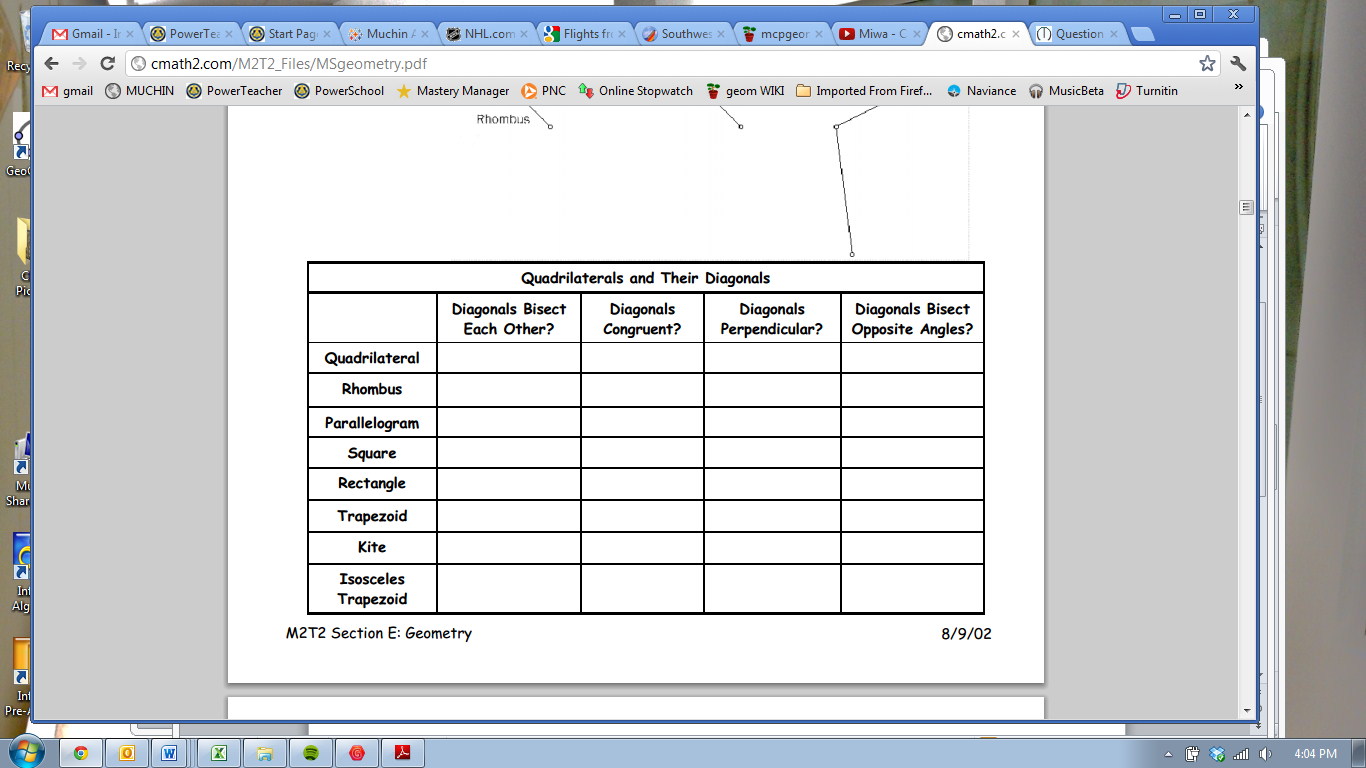
**Failure to show all work and write in complete sentences will result in LaSalle!**

Fill in the blanks below and mark the figure to the right accordingly.

|  |
| --- |
| 1) **Parallelogram**   1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sides are parallel PL \_\_\_ AR, AP\_\_ RL 2. The \_\_\_\_\_\_\_\_\_\_\_\_ sides are \_\_\_\_\_\_\_\_\_\_\_ 3. The opposite angles are \_\_\_\_\_\_\_\_\_\_\_ 4. The \_\_\_\_\_\_\_\_\_\_\_bisect each other 5. Any \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles are supplementary |
| 2) **Rectangle**   1. All properties of a parallelogram apply to rectangle 2. All angles are \_\_\_\_\_\_\_\_\_\_\_ angles 3. The diagonals are \_\_\_\_\_\_\_\_\_\_\_\_ |
| 3) **Kite**   1. Two \_\_\_\_\_\_\_\_\_\_\_\_\_\_ pairs of consecutive sides are congruent 2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are perpendicular 3. \_\_\_\_\_\_\_\_ diagonal is \_\_\_\_\_\_\_\_\_ bisector of the other 4. One of the \_\_\_\_\_\_\_\_\_\_\_\_\_ bisect a pair of opposite angles 5. One pair of\_\_\_\_\_\_\_\_\_\_ angles are congruent |
| 4) **Rhombus**   1. All the properties of a parallelogram applies to rhombus 2. All the properties apply to a rhombus 3. All the \_\_\_\_\_\_\_\_\_\_\_\_\_ are congruent, (rhombus is equilateral) 4. The \_\_\_\_\_\_\_\_\_\_\_\_ bisect the angles 5. The diagonals are \_\_\_\_\_\_\_\_\_\_\_\_\_ bisectors of each other 6. The diagonals divide the rhombus into \_\_\_\_\_\_\_congruent right triangles |
| 5) **Square**   1. All properties of a rectangle apply to square 2. All properties of rhombus apply by to square 3. The diagonals form four isosceles right triangle |
| 6) **Isosceles Trapezoid**   1. The legs are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by definition 2. The bases are parallel 3. The \_\_\_\_\_\_\_\_ base angles are congruent 4. The \_\_\_\_\_\_\_\_ base angels are congruent 5. The \_\_\_\_\_\_\_\_\_\_ are congruent 6. Any lower base angle is supplementary to any upper base angle |

|  |  |
| --- | --- |
| 1) Which statement is true?  A. All parallelograms are squares.  B. All squares are parallelograms  C. All quadrilaterals are parallelograms  D.All kites are trapezoids | 2) State the most specific name the figure. |
| 3) State the most specific name the figure. | 4) State the most specific name the figure. |

**Directions:** Put in “X” for each property that applies to each type of quadrilateral.



**Directions:** Match the description with ***all*** the terms that fit it.

1. **Trapezoid b. Isosceles triangle c. Parallelogram d. Rhombus**

**e. Kite f. Rectangle g. Square h. All quadrilaterals**

1. \_\_\_\_\_\_\_\_\_\_\_Diagonals bisect each other.
2. \_\_\_\_\_\_\_\_\_\_\_Diagonals are congruent.
3. \_\_\_\_\_\_\_\_\_\_\_Opposite sides are congruent.
4. \_\_\_\_\_\_\_\_\_\_\_Both diagonals bisect angles.
5. \_\_\_\_\_\_\_\_\_\_\_Diagonals are perpendicular.
6. \_\_\_\_\_\_\_\_\_\_\_Measure of interior angles sum to 360°
7. \_\_\_\_\_\_\_\_\_\_\_Opposite angles are congruent.
8. \_\_\_\_\_\_\_\_\_\_\_Diagonals are perpendicular bisector of each other.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 5) Find the measurements of angle B, C, and D. | 6) Which of the following quadrilaterals have diagonals that are perpendicular?   1. Parallelogram 2. Rhombus 3. Square 4. Kite 5. I 6. II and III only 7. II, III, and IV 8. II and IV only 9. All of the above   To prove your answer above, draw four different diagrams with their diagonals.   |  |  | | --- | --- | | Parallelogram | Rhombus | | Square | Kite | |
| 7) If one diagonal of a rhombus is 10 cm and the other 24 cm, how long is each side of the rhombus? |
| 8) Find the length of DE.   1. 5 2. 5 3. 6 4. 6   Justify your answer in a sentence:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 9) If one diagonal of a rhombus is 24 cm and the other is 70 cm, how long is each side of the rhombus? | 10) State whether each statement is always true, sometimes true, or never true.   1. A rhombus is a square. 2. A square is a rectangle. 3. Diagonals of a rectangle bisect each other. 4. A trapezoid is a parallelogram. |

**Practice Quiz Questions:**

|  |  |
| --- | --- |
| **1.** Which of the following have all sides congruent?   1. Square 2. Rectangle 3. Rhombus 4. I 5. I and II only 6. I and III only 7. None of the above 8. All of the above | **2.** Which of the following parallelograms have congruent diagonals?   1. Square 2. Rectangle 3. Rhombus 4. I only 5. I and II only 6. I and III only 7. None of the above 8. All of the above |
| 3.Tell if the statement is always true, sometimes true, or never true. | 4. Name each quadrilateral – parallelogram, rectangle, rhombus and square – for which the statement is true.   1. The diagonals bisect each other. 2. Opposite sides are congruent. 3. It is equiangular and equilateral. 4. The diagonals bisect opposite angles. 5. The diagonals are perpendicular. 6. It is equiangular. |
| 5.  http://docs.google.com/File?id=dcjnm59j_16gf68k5fk_b | 6. Which statement is true?  A. All parallelograms are rhombuses.  B. All quadrilaterals are parallelograms  C. All quadrilaterals are squares  D.All rectangles are parallelograms |
| 7. Which of the following statements is **NOT** true about parallelograms?   1. consecutive angles are congruent 2. opposite sides are congruent 3. opposite angles are congruent 4. the diagonals bisect each other | 8. |
| 9. Judging by appearance, classify the figure in as many ways as possible.     |  |  | | --- | --- | | **A** | rectangle, square, quadrilateral, parallelogram, rhombus | | **B** | rectangle, square, parallelogram | | **C** | rhombus, trapezoid, quadrilateral, square | | **D** | square, rectangle, quadrilateral | | 10 10. *WXYZ* is a parallelogram. Name an angle congruent to  a parallelg     |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **A** |  | **B** |  | **C** |  | **D** |  | |
| 11. Which of the following quadrilaterals have diagonals that are perpendicular?   1. Parallelogram 2. Rhombus 3. Square 4. Kite 5. I 6. II and III only 7. II, III, and IV 8. II and IV only 9. All of the above | 12. Which of the following quadrilateral is a parallelogram?   1. Rhombus 2. Square 3. Rectangle 4. Trapezoid 5. I 6. II and III 7. I and III 8. I, II, and III 9. All of above |

Create a quadrilateral Venn-diagram: